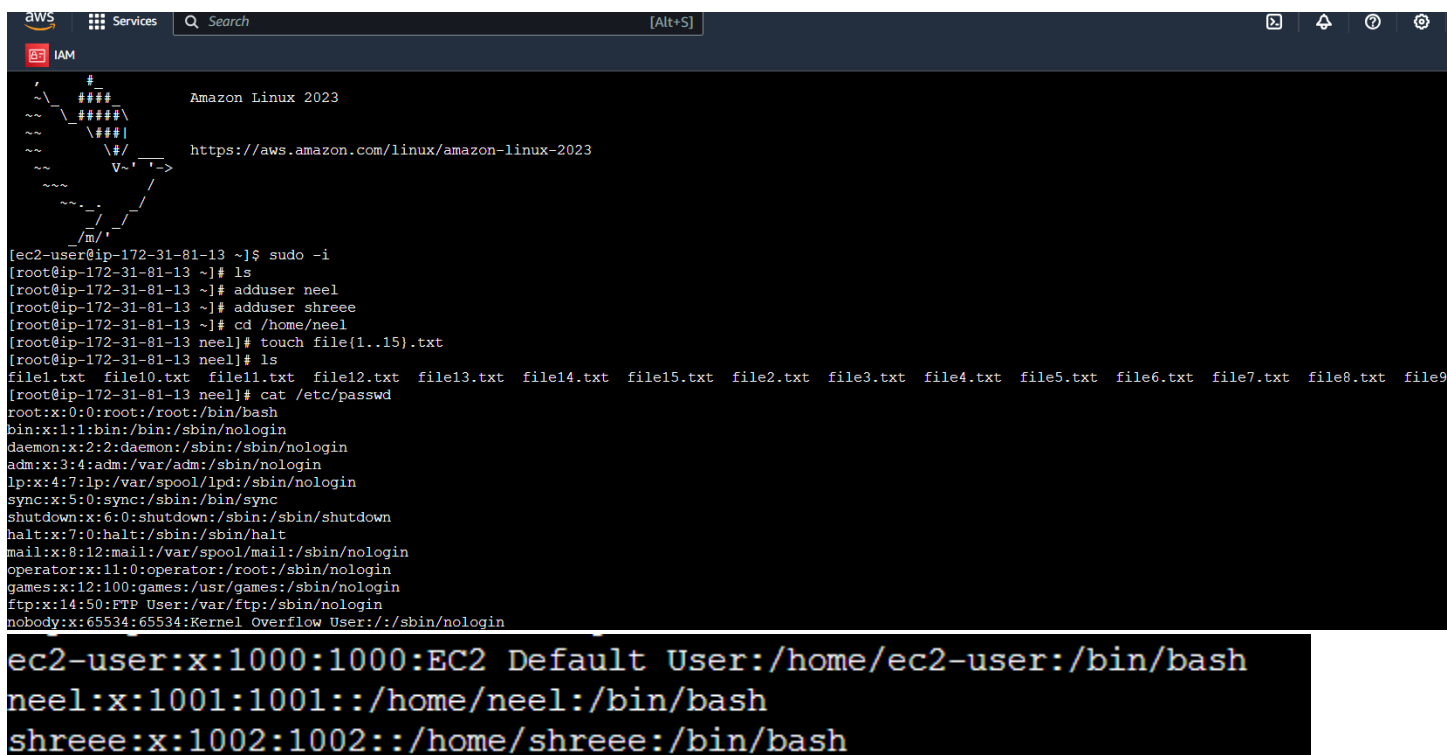


AMI is a snapshot of your configured instance on AWS.

It includes all the settings, files , and users you've set up on your instance .

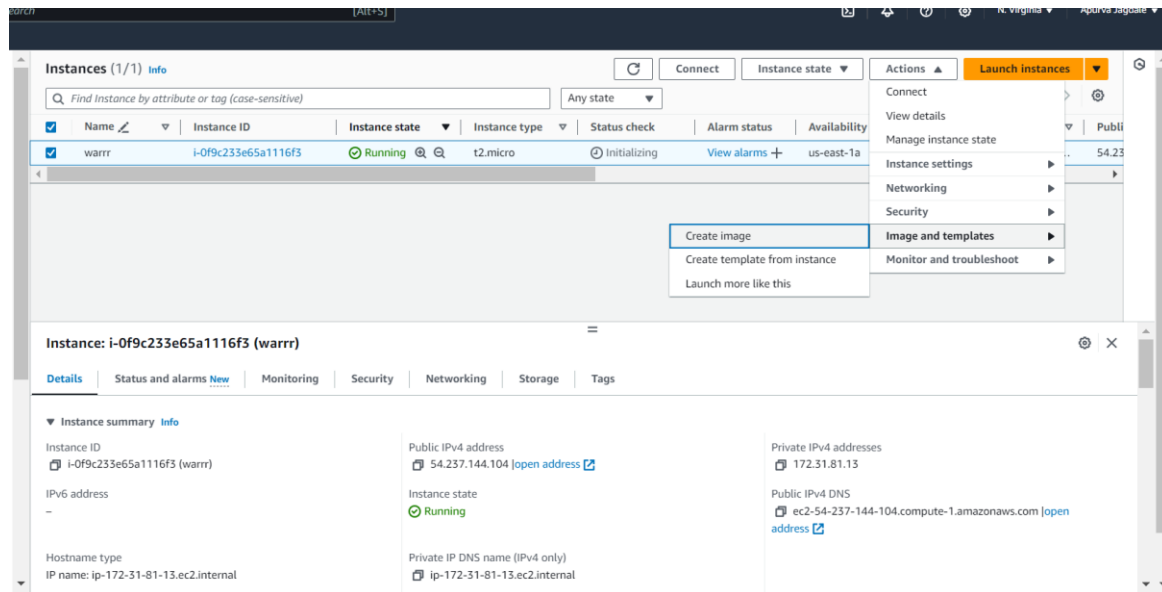
1)HOW TO CREATE AN AMI (Amazon Machine Image) ??



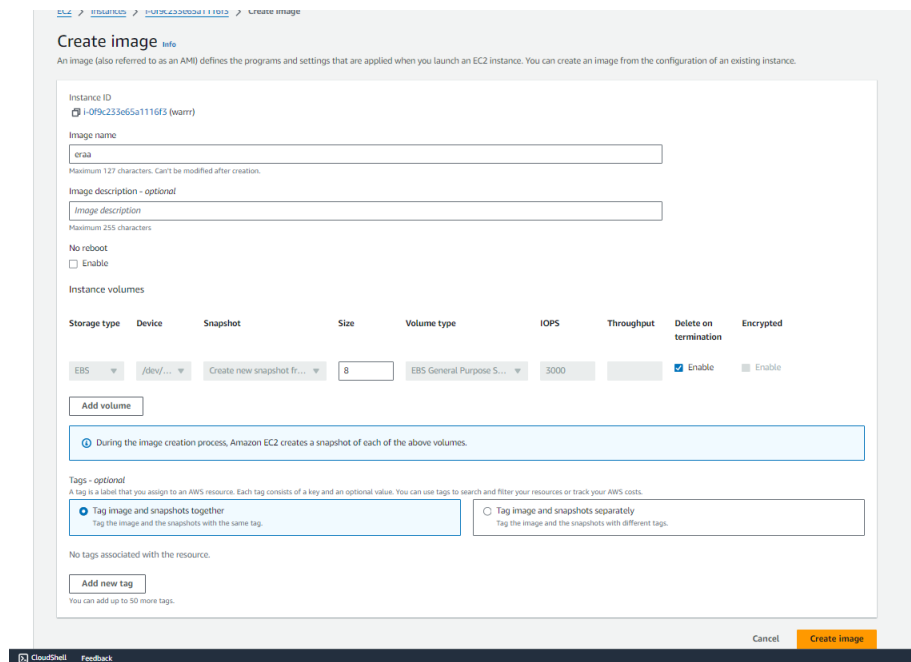
```
aws
Services
Q Search [Alt+S]
IAM
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-172-31-81-13 ~]$ sudo -i
[root@ip-172-31-81-13 ~]# ls
[root@ip-172-31-81-13 ~]# adduser neel
[root@ip-172-31-81-13 ~]# adduser shreee
[root@ip-172-31-81-13 ~]# cd /home/neel
[root@ip-172-31-81-13 neel]# touch file{1..15}.txt
[root@ip-172-31-81-13 neel]# ls
file1.txt file10.txt file11.txt file12.txt file13.txt file14.txt file15.txt file2.txt file3.txt file4.txt file5.txt file6.txt file7.txt file8.txt file9
[root@ip-172-31-81-13 neel]# cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/:/sbin/nologin
ec2-user:x:1000:1000:EC2 Default User:/home/ec2-user:/bin/bash
neel:x:1001:1001::/home/neel:/bin/bash
shreee:x:1002:1002::/home/shreee:/bin/bash
```

If you have an Instance with configuration and you want to replicate it simply you can create AMI.

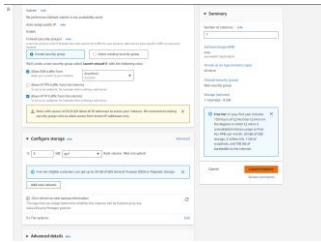
Step I : In EC2 dashboard ,go to instances then select your instance then click on Actions button and select the Image and Templates option and choose the create image.



Step II : give name of your image ,and click on create image.



Step III : check the AMI and Snapshots are created or not.



Step V : select the instance and connect it .

Step VI : after connecting, check the content of old instance is present or not.

```

root@ip-172-31-94-204 ~# cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:150:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:nobody:/var:/sbin/nologin
dbus:x:81:81:system message bus:/sbin/nologin
systemd-networkd:x:192:192:systemd Network Management:/usr/sbin/nologin
systemd-oomd:x:999:999:systemd User-space OOM Killer:/usr/sbin/nologin
systemd-resolved:x:193:193:systemd Resolver:/usr/sbin/nologin
sshd:x:74:74:ssh:/usr/sbin/ssh-keygen:/usr/sbin/nologin
rpcuser:x:32:32:rpcbind:/var/lib/rpcbind:/sbin/nologin
libstoragemgmt:x:997:997:daemon account for libstoragemgmt:/usr/sbin/nologin
systemd-coredumpd:x:996:996:systemd Core Dump:/usr/sbin/nologin
systemd-timesyncd:x:995:995:systemd Time Synchronization:/usr/sbin/nologin
chrony:x:994:994:chrony system user:/var/lib/chrony:/sbin/nologin
ec2-instance-connect:x:993:993:/home/ec2-instance-connect:/sbin/nologin
rpcuser:x:23:23:RPC Service User:/var/lib/rpc:/sbin/nologin
coredumpd:x:72:72:/usr/sbin/nologin
ec2-user:x:1000:1000:EC2 Default User:/home/ec2-user:/bin/bash
neel:x:1001:1001:/home/neel:/bin/bash
shreeen:x:1002:1002:/home/shreeen:/bin/bash
[root@ip-172-31-94-204 ~]# ls /home/neel
file1.txt file10.txt file11.txt file12.txt file13.txt file14.txt file15.txt file16.txt file17.txt file18.txt file19.txt
[root@ip-172-31-94-204 ~]#
  
```

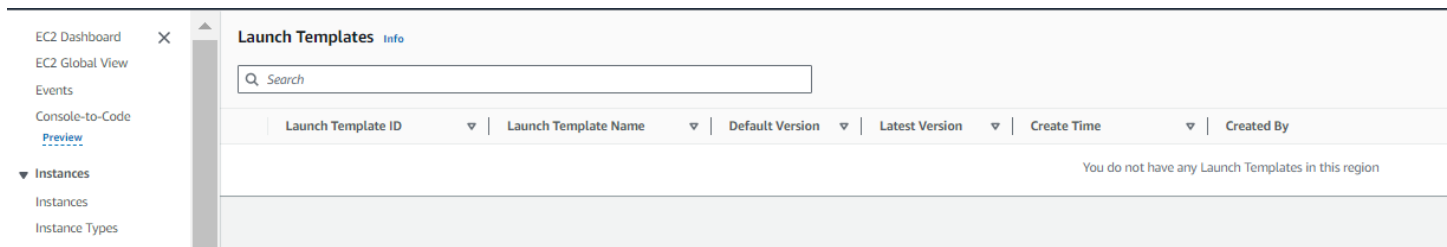
2) HOW TO CREATE TEMPLATE AND LAUNCH IT ???

Template is the way to quickly create Instances with predefined Settings.

It save your time by automating the instance Creation Process.

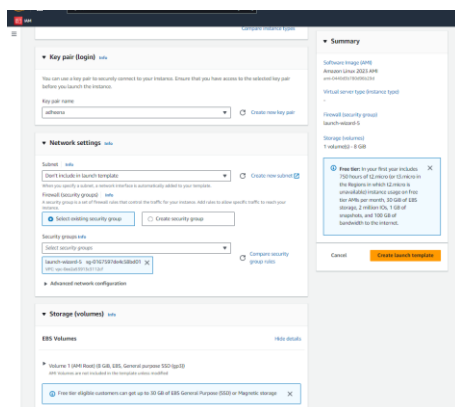
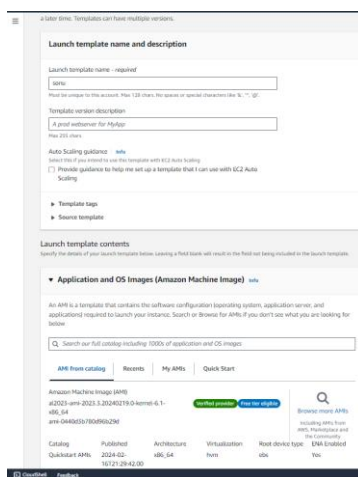
Step I : to create the template go to EC2 service and click on “Launch Templates”.

Step II : then click on “Create Launch Template” and give the name and description for template.

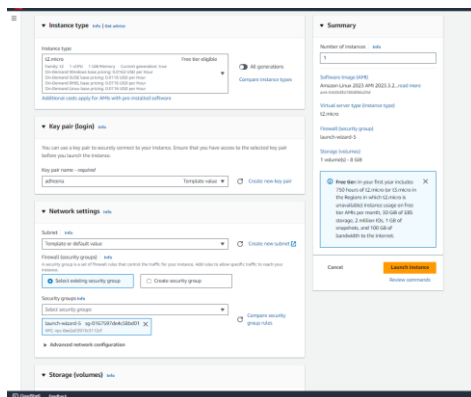
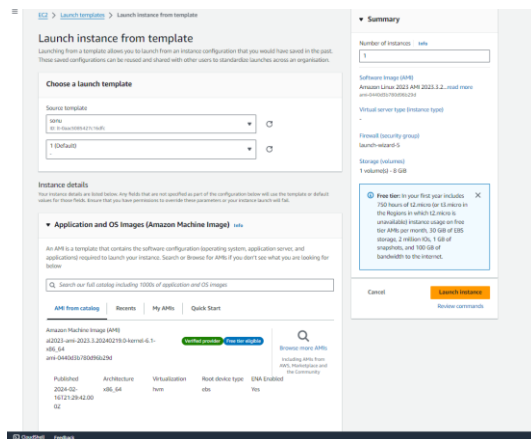
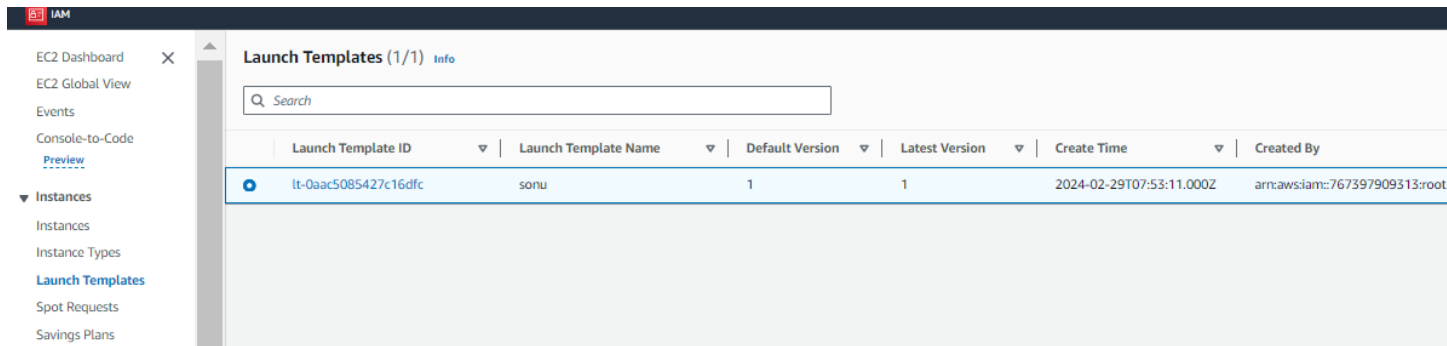


Step III : Select the AMI ,Instance type, key-pair and Security groups.

Step IV : Click on “Create Launch Template”



Step V : go to templates select the template then Click on Actions and choose the option Launch instance from Template.



Step VI : we also add the shell scripts to run when the instance launches.Do that ,and launch Instance.

Amazon EC2 console - Create new instance

Amazon Linux 2023 AMI 2023.3.2 - read more
ami-0443d3176050a2254

Virtual server type (instance type)
t2.micro

Firewall (security group)
launch-wizard-5

Storage (volumes)
1 volume(s) - 8 GiB

Free tier in your first year includes:
750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on Free tier. 44% per month, 33 GiB of EBS storage, 2 million I/Os, 1 GiB of snapshots, and 100 GiB of bandwidth to the internet.

Launch instances

Review commands

Metadata accessible: Template or default value

Metadata transport: Template or default value

Metadata version: Template or default value

Metadata response hop limit: Template or default value

Allow tags in metadata: Template or default value

User data - optional: Upload a file with your user data or enter it in the field.
Choose file

```
#!/bin/bash
sudo -i
yum install httpd -y
systemctl start httpd
systemctl enable httpd
echo "Life is waiting for you give your best Shot" > /var/www/html/index.html
```

1 User data has already been base64 encoded

Step VII : And here ,Instance is created based on your launch template.

EC2 console - INSTANCES

Find Instance by attribute or tag (case-sensitive)

Any state

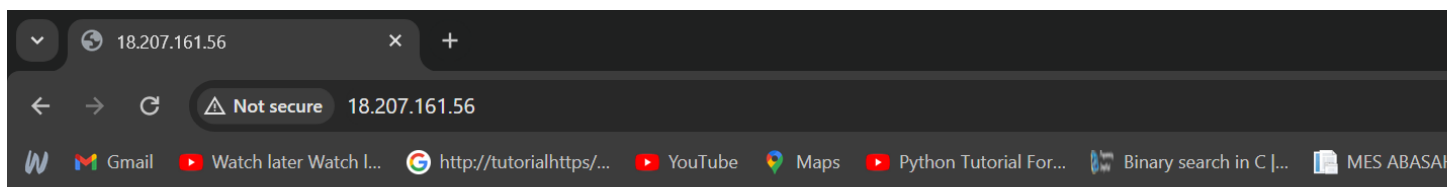
Instance state (client): =terminated

Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input checked="" type="checkbox"/>		i-06add90e516ae2dac	Running	t2.micro	-	View alarms +	us-east-1c	ec2-18-207-161-56.co...
<input type="checkbox"/>		i-0af6b967f6d82cc9f	Terminated	t2.micro	-	View alarms +	us-east-1a	-

Step VIII : Select the Instance public IP ,copied it and paste on your another browser.

Step IX: Output will be Generated .



Life is waiting for you give your best Shot